

Tennessee has joined the family of state organizations which publish a journal, and under date of

June appears the first number of **NEW STATE JOURNALS.** *The Journal of the Tennessee State Medical Association.* It is

in every way a clean, dignified, well published periodical, and is under the able editorial management of Dr. George H. Price, Nashville. We are advised that from this, its beginning, it is to follow the only safe policy and accept for advertising only such preparations as have been approved by the Council on Pharmacy and Chemistry. We most assuredly extend to this youngest of the family every good wish for long life, sturdy good health and a valuable career. A couple of years or so ago, the state organization of Maryland had the journal matter under consideration but, unfortunately, instead of starting their own journal, they made the *Maryland Medical Journal* the official publication of the Medical and Surgical Faculty of Maryland (which is the name of the state medical organization). The word "unfortunately" is used advisedly, for this publication has always been close up in the front rank of the "published-for-profit" class of medical (?) journals. We imagine it must be a good deal of a shock to some of the physicians of Maryland, for instance, some of the members of Johns Hopkins, to see, in the pages of the official journal of their "Faculty," advertisements of such things as glycozone, cypridol, Gray's tonic, ergoapiol, Hagge's codliver oil (nit), tongaline, papine, eusoma, bovinine, seng, cactina, antiphlogistine, passiflora, chionia, Peacock's bromides, Fellow's syrup, glycothymoline, peptomangan, viburnum compound, fig syrup, resinol, salhepatica, etc. About the only nostrum we miss is antikamnia. And still, with this truly wonderful list of notorious nostrums to its credit, the editor has the nerve to say:

"As to the character of the Journal's advertising matter, we are pleased to affirm that it is of a high order, as conceded by its contemporaries and competent judges in general. * * * That the advertising pages of the Journal are clean, consistent and commendable will best be seen by invidious comparisons with others of its class."

Now, it takes real nerve to make a statement like that, and whatever the editor may be, he is certainly entitled to consideration for his monumental nerve! The qualifying word is there, however. It probably is no worse than others "of its class"; but, good Lord, what a class! No wonder the Maryland "Faculty" has decided to publish a medical journal of its own and thus divorce decent medicine from predatory nostrum fraud. The only wonder is that the respectable element in the medical profession of Maryland has been able to tolerate the unholy alliance for so long.

ACUTE OTITIS MEDIA IN INFANCY AND CHILDHOOD.*

By H. BERT. ELLIS, M. D., Los Angeles.

Diseases of children have been and still are neglected to a great extent; more neglected than any other branch of the practice of medicine. This is largely due to the fact that diagnosis is particularly difficult, the infant being unable, through lack of language, to give any idea of the physical symptoms; and the young child too imaginative to correctly express the condition.

In infants, it is not easy to diagnose otitis media; not only are the parts very small, but the external meatus is apt to be filled with epidermis scales. In dead nurslings, purulent inflammation of the ear is found at autopsies in four-fifths of the cases; this form of trouble is usually latent, and in other cases suggested by restlessness and tossing of the head. This concomitant otitis differs quite sharply from the ordinary form, which has much more pronounced symptoms, the most prominent of which is pain, but in the most destructive lesions of scarlet fever, pain is sometimes conspicuously absent, or at least not complained of by the apathetic child; this latter fact is of great importance and must not be lost sight of by the general practitioner. On the other hand, severe symptoms simulating brain lesions, stupor or convulsions, may arise in simple otitis and these be immediately relieved by paracentesis; hence there is a need of examination of the ears in all such cases, for the little patients thus affected cannot tell of their earaches.

At birth the interior and exterior walls of the external meatus and the membrana tympani are in simple coaptation and the irregularities filled with desquamated epithelium, the canal opens in a few days, forming an hour-glass canal (smaller at the inner end), the axis of the meatus being directed upward, causes the downward pulling of the auricle to inspect the membrane, which together with the cavity is about as extensive in the child as in the adult. A sieve-like bone separates the floor of the tympanum from the carotid canal and the jugular fossa. "The oblique position of the meatus and the thin plate of bone allow a puncture of the jugular bulb during paracentesis."

"The greater resistance of the drum membrane in the young (the external cutis layer being often thicker than in the adult), the median connective tissue membrane very solid and the inner mucous membrane and its pavement epithelium at least as normal as in advanced age, contribute to the comparative infrequency of perforations." (Jacobi Otitis Media in Children. *Archives of Otology*, April, 1905.)

The relative infrequency of spontaneous perforation and the anatomical difficulty of drainage, make the purulent secretion in the tympanum seek other methods of escape. At birth, the temporal bone is loosely connected with the cranial bones; is vascu-

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lar and traversed by many foramina containing blood vessels. The outer walls are more spongy than the tegman, and hence the readiness of post aural abscesses in infancy.

Owing to the influence of gravitation and the fact that the young periosteum and the numerous foramina are readily dissected the direction of least resistance is usually outward,

(a) upward and outward through the Rivinian fissure in the antral roof and backward between the bone and periosteum to form abscesses behind and above the ear;

(b) through cartilaginous fissures, involving posterior auricular glands, displacing the auricle outward and forward in the characteristic way;

(c) through the imperfectly closed roofs or the communicating blood vessels and lymph channels, directly to the middle fossa, setting up a meningitis or subdural or brain abscess;

(d) from the same sources, jugular thrombosis. In the very young, because the sinus is a flat affair, it is not involved, but in older children, through carious softening or through the medium of intercommunicating structures there may be thrombosis of the lateral sinus.

(e) The process may be extended by way of the posterior surface to the cerebellum.

These pathological processes being so numerous, serious and likely to occur, there is a sharp demand for early, prompt, and if possible, prophylactic treatment. Immediate adenectomy on involvement, careful and extensive incision of the drum, are the early procedures.

Another important fact is that the lymphatics are nine times more permeable in infancy than in the adult.

The differences between the adult and infant eustachian tubes are briefly as follows:

1. The tube is much shorter at birth, less than one-half as long (15 mm. to 38 mm.).

2. The orifice and calibre are nearly as great as in the adult, hence proportionately much wider.

3. The child's tube is straight, having no angle at the isthmus.

4. The tube is nearly horizontal; in the adult, the pharyngeal end is 12 to 14 mm. lower.

5. The mouth of the tube in the pharynx is, in a child at term, on a level or slightly below the plane of the hard palate. All these conditions favor the entrance of germs into the middle ear through the tube from the inspired air and nasal secretions.

The presence of vascular lymphoid tissue at the door of this open pathway (often itself infected) renders otitic infection quite a common thing.

Kerrison (*Laryngoscopic*, Sept., '07) states that acute tympanic inflammation calls for adenectomy, for the following reasons:

1. The operation for adenectomy involves some risk to healthy ears. It seems wiser, therefore, to operate during the acute stage, when the ears can be safeguarded by a free incision of the drum membrane.

2. The abstraction of blood relieves tubal congestion and favors resolution.

3. With a growth sufficiently large to produce congestion of the pharynx, recovery from acute tympanic disease is apt to be slow.

4. Some cases will not recover until adenoid tissue is removed.

On account of the low level of the pharyngeal orifice, Preysing denies the easy exit of pus from the ear to the pharynx. He claims that the pus, which is mostly thick, "would rather, while the infant is on its back, run into the mastoid antrum than through the tube."

Nearly all earaches in children under ten years of age, and the periodical earaches which occur in the night time, lasting for a few hours and recurring for a few hours for several days, are due to adenoid congestion. Indeed, this condition is the cause of febrile attacks more frequently than any other disease of infancy save the exanthemata.

"Otitis media is of frequent occurrence in the very young. It may combine with the retrograde involution of the embryonal myxomatous tissue, which may disappear soon after birth, but often persists in the antrum and tympanic cavity and undergoes purulent softening." (Jacobi, *Otitis Media in Children. Archives of Otology*, April, 1905.)

Microbes get into the middle ear in the contiguity of the surface of the mucous membrane quite frequently, or are thrown in during coughing, vomiting, or sneezing (or especially blowing the nose); nurslings are in danger during suckling and deglutition. Medicinal and other injections into the nose are sometimes the cause of infection, more especially the snuffing up of solutions or powders.

In severe otitis media, scarlet fever leads (10%). Cerebro-spinal meningitis, the infection coming from within, produces hopeless deafness and staggering. Measles, diphtheria, influenza, pneumonia, enteritis, smallpox are all diseases which may produce an otitis media.

Pain, dull to sharp, continuous or intermittent, sometimes with moaning, more often with a sharp cry, restlessness, pulling of the hair, burrowing of the head in the pillow, fever, sometimes stupor or convulsions are seen in the very young. Older children complain, the same as adults, of a feeling of fullness, tinnitus and deafness. There may be also tenderness of the ear on manipulation.

The principal thing, however, is the recognition of adenoids and their removal prior to infection, *and no age is too young*. In not a few instances I have operated upon infants a month old. All babes that have difficulty in nursing and breathing should be examined by the specialist, and if adenoids are enlarged, they should be immediately removed. Tonsils, at this age, should not be operated upon.

The symptomatology of adenoids in infancy differs considerably from that of childhood, but it is still fairly characteristic. However, the evil results

in infancy are even worse than they are in childhood.

There seems to be a prejudice in the profession, and among the specialists, to a certain extent, against the removal of adenoids in infancy, because of their likelihood of recurrence, but this should be of little weight, for if it be true, the infant is the gainer during the period of their absence. Their removal in infancy is accompanied by slight danger, and their removal in childhood is no more serious, so that we cannot be justified in allowing infants afflicted with enlarged adenoids to have their development seriously or irreparably interfered with; when a simple operation, practically unattended by danger, will certainly to a great extent relieve them of these conditions.

The nose of the infant is relatively small and the respiratory space very small. The nasopharynx is low, but deep from in front backwards, being almost as deep as in the adult. The height increases rather rapidly for six months, and then slowly up to two years. The nasopharynx is extremely vascular in infancy and the lymphoid ring is well developed.

Because of the low condition of the superior pharynx and post nasal opening, a relatively small enlargement of the normal adenoid tissue may cause a marked obstruction to nasal respiration. In infancy, this is a very serious matter, especially when it is anywhere near complete. Interference with nasal respiration necessitates oral respiration, which the young infant performs very imperfectly when asleep. This interference results in constant deprivation of a sufficient supply of oxygen, which in turn, produces a disturbance of nutrition, which is uninfluenced by any other method of feeding or mode of life.

Another serious result of nasal obstruction is the interference with suckling and sometimes with swallowing. The effort of suckling is so great that these babies take only enough food to satisfy the acute pangs of hunger, which again interferes with their nutrition and development. The difficulty of breathing makes them restless at night and interrupts their sleep, another disturbance to nutrition.

Snuffles in infancy is almost as diagnostic of enlarged adenoids as it is in childhood, and adenoids are almost always found in babies who suffer from frequent or continuous colds in the head. Irritating coughs, especially those occurring at night, without physical sign, are usually the result of adenoids.

Adenoids frequently accompany and probably cause catarrhal laryngitis and spasmodic croup. I say probably, because their removal so frequently relieves these symptoms.

An infant who is restless and sleepless at night should, if definite cause for same be not evident, be examined for hypertrophied adenoids.

Adenoids frequently cause enlargement of the cervical lymph glands, and they are without doubt the greatest factor in the production of acute otitis media, consequently should be removed as a prophylactic measure.

THE INDICATIONS FOR THE MASTOID OPERATION.*

By HILL HASTINGS, M. D., Los Angeles.

The subject of middle ear and mastoid suppuration has been discussed time and again in the meetings of ear, nose and throat societies. It is a subject of such vital importance that the chairman of this section and the program committee are to be commended for bringing it up for consideration at this general meeting of our State Society. The part of the subject assigned to me—The Indications for the Mastoid Operation—is, I take it, to present for discussion the chief signs and symptoms that have been accepted by otologists in the last few years as indications for immediate operation.

In the beginning it must be admitted that some mastoid operations are done where recoveries would likely have resulted without operation. On the other hand it must, with equal fairness, be admitted that in some cases death resulted through unwarrantable delay in operating. It should be stated also that seldom are the mastoid symptoms so severe that the patient would seek operation until serious, if not fatal, complications had arisen. It is not within the province of this paper to discuss these complications.

In every case of middle ear suppuration, the mastoid antrum, being a part of the middle ear, is believed to be involved and there may be more or less inflammatory congestion of the adjacent mastoid cells. It is therefore fallacious to say "when the mastoid antrum is involved the mastoid should be opened." This advice, I believe, is generally discredited both by the specialist and the general practitioner. No such arbitrary law can be laid down. In each case a careful study of many factors must be made to insure a timely operation. These factors may be determined by the following steps: (A) A careful otoscopic examination. (B) Examination of the mastoid region. (C) The history of the case and the general signs and symptoms.

(A) The Otoscope Examination. What can we learn from this? First, the amount and character of the discharge, including a microscopic examination to determine the infective organism. Second, the appearance of the fundus; that is, the drum membrane and the adjacent canal wall. Third, the degree of deafness.

A careful otoscopic examination is most important, for on that alone without mastoid pain or tenderness and without general symptoms, such as fever, a mastoid operation is in a few cases indicated. Permit me to cite one illustrative case:

Mr. C., aged fifty-two, consulted on November 23, 1907, on account of profuse discharge from the right ear of four weeks' duration. The onset was sudden, four weeks before; severe pain in the ear followed a sore throat. The drum membrane perforated spontaneously and profuse discharge with relief from pain had continued; never any mastoid pain or soreness; no fever, nausea or vomiting; general health

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